United States of America

DRAFT PROPOSAL FOR THE WORK OF THE CONFERENCE

Proposal for Resolution 606

Agenda Item 1.15b: to review the results of studies concerning the radionavigation-satellite service in accordance with Resolutions **604 (WRC-2000)**, **605 (WRC-2000)** and **606 (WRC-2000)**;

Background Information: WRC-2000 agreed to additional allocations to the radionavigation-satellite service (RNSS) (space-to-Earth) in the 1 260-1 300 MHz band making the entire 1 215-1 300 MHz band available for RNSS. This band was also allocated to the RNSS (space-to-space). The band 1 240-1 300 MHz is also allocated on a co-primary basis to radiolocation and radionavigation services and is used for long-range primary radar systems. Studies were conducted pursuant to the provisions of Resolution **606 (WRC-2000)**. Among other things, Resolution **606 (WRC-2000)** called for studies on "the need for a power flux-density limit concerning the operation RNSS (space-to-Earth) systems in the frequency band 1 215–1 300 MHz in order to ensure that the radionavigation-satellite service (space-to-Earth) will not cause harmful interference to the radionavigation and radiolocation services." Also in Resolution **606 (WRC-2000)**, WRC-2000 resolved that no additional constraints are to be placed on RNSS systems operating in the 1 215-1 260 MHz band.

The Global Positioning System (GPS), an RNSS system which operates on 1 227.6 MHz (24 MHz bandwidth). Currently, this signal is used for high precision GPS in high productivity applications, such as machine guidance in survey, construction, agriculture, and mining. This signal has been transmitted at its current power level since 1978 and there has been no reported harmful interference to other users of the band. This has been accomplished without the need for power flux-density (pfd) limits in the Radio Regulations (see also Recommendation ITU-R M.1088). There are large numbers of GPS receivers operating in the band 1 215-1 260 MHz.

It is noted that the GLONASS RNSS system has also operated successfully in the 1 215-1 260 MHz band for many years without causing harmful interference to other co-frequency systems. This is accomplished on the basis given in Recommendation ITU-R M.1317 and includes a signal of up to –133 dB W/m^2/MHz. Operational experience with current GPS and GLONASS system characteristics in the 1 215-1 260 MHz band, has not led to any reports of harmful interference being caused to existing radar systems.

As RNSS system characteristics are expected to evolve and new systems are planned, analyses are being conducted to determine the impact of a more powerful RNSS (space-to-Earth) signal on radar systems in the 1 215-1 300 MHz band. Some administrations have planned RNSS systems that have a future requirement to produce a pfd level higher than –133 dB (W/m^2/MHz) in the 1 215-1 260 MHz band.

Users of radars in the band will be protected in accordance with the provision of **No. 5.329**.

Proposals:

USA/ /1
NOC

1 215-1 240 MHz

Allocation to services		
Region 1	**Region 2**	**Region 3**
1 215-1 240	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) (MOD) 5.329 5.329A SPACE RESEARCH (active) 5.330 5.331 5.332	
1 240-1 260	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) (MOD) 5.329 5.329A SPACE RESEARCH (active) Amateur 5.330 5.331 5.332 5.334 5.335	
1 260-1 300	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) (MOD)5.329 5.329A SPACE RESEARCH (active) Amateur 5.282 5.330 5.331 5.334 5.335 5.335A	

Reasons: Noting **No. 5.329**, there is no need for a pfd limit to be imposed in 1 215-1 300 MHz band. Some administrations have successfully operated RNSS and radar systems in the 1 215-1 260 MHz band for more than 23 years with no reported harmful interference.

USA/ /2
MOD

5.329 Use of the radionavigation-satellite service in the band 1 215-1 300 MHz shall be subject to the condition that no harmful interference is caused to, and no protection is claimed from, the radionavigation service authorized under No. **5.331**. ~~See also Resolution **606 (WRC-2000)**.~~

Reasons: Consequential to the determination that there is no need for a pfd limit to be imposed in the 1 215-1 300 MHz band.

USA/ /3
SUP

~~**RESOLUTION 606 (WRC-2000)**~~

Reasons: Consequential to the determination that there is no need for a pfd limit to be imposed in the 1 215-1 300 MHz band.

_____